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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/039,010 03/13/98 LEUNG

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EXAMINER

LM02/1228

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ART UNIT

PAPER NUMBER

2744

DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/039,010

Applicant(s)
Leung et al

Examiner
Charles Craver

Group Art Unit
2744



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-27 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 21 and 22 is/are allowed.

☒ Claim(s) 1-14, 16-18, 20, and 23-27 is/are rejected.

☒ Claim(s) 15 and 19 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 17 recites the limitation "the HLR" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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5. Claims 6, 8, 23, 25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Heidari, US Pat 5,854,978.

Regarding claim 6,

Heidari discloses a wireless communication system comprising:

first means, including stored operational parameters, for providing mobile communications (col 4 line 19-col 5 line 8);

base station means (12) and, inherently, MSC means for communicating with said first means (col 3 lines 16-30); and

over the air administration means for network initiating the alteration of said operational parameters stored in said first means(col 5 line 60-col 6 line 27).

Regarding claim 8,

Heidari discloses a wireless communication system comprising:

Mobile station means in contact with at least one base station;

storage means for storing operational parameters, in said mobile station (col 4 line 19-col 5 line 8);

base station means (12) and, inherently, MSC means for communicating with said first means (col 3 lines 16-30), providing a network; and

network initiated means for altering said operational parameters stored in said storage means in accordance with data transmitted to said mobile unit in an administration process (col 5 line 60-col 6 line 27).

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Regarding claim 23,

Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station comprising the steps of:

paging a mobile station from the network;

setting an administrative updating indicator in the mobile station in accordance with a received message (col 5 line 60-col 6 line 5); and

updating operational parameters in the mobile station in accordance with data received (col 6 lines 6-27).

Regarding claim 25,

Heidari further discloses that said data such as said programming may be transmitted on an assigned traffic channel (col 3 lines 31-38 and col 6 lines 3-5).

Regarding claim 27,

Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station comprising the steps of:

paging a mobile station from the network;

supplying an administrative updating indicator in the mobile station in accordance with a received message (col 5 line 60-col 6 line 5); and

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updating operational parameters in the mobile station in accordance with data received
(col 6 lines 6-27).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari.

Regarding claim 1,

Heidari discloses a method for a network to initiate the updating of operational parameters in a mobile station comprising the steps of

paging a mobile station from the network (col 5 line 60-col 6 line 5);
modifying the mobile station responses to received traffic channel messages in accordance with a parameter updating indicator received from the network (col 6 lines 6-15); and
updating operational parameters in the mobile station in accordance with data received on the assigned traffic channel (col 6 lines 6-27).

Heidari does not expressly disclose a step of assigning a traffic channel to the mobile station after receiving an acknowledgment of the page.

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However, since Heidari does disclose that said parameter updating may take place when a mobile station is handed over from one cell to another (col 3 line 57-col 4 lin 18), it would have been obvious to one skilled in the art that, since handover may occur when a mobile station is off hook and not using a traffic channel, that one would have to be opened in order for updating procedures to commence, after a control channel page is responded to. Further regarding claim 2, it would also be obvious in such a situation that said traffic channel would then be released after updating was finished, as there would be no need to keep a traffic channel open if the phone is no longer in use.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 1 above, and further in view of Mizikovsky, US Pat 5,943,425.

While disclosing applicants invention of claim 1, Heidari does not disclose a validation step comparing an internally generated signature with a received signature.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

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The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

9. Claims 4, 5 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari in view of Mizikovsky.

Regarding claim 4,

Heidari discloses a method of supplying data to be used in a network initiated over the air updating of operational parameters in a wireless communication system mobile station using a traffic channel comprising the steps of:

alerting a mobile station to an administrative update (col 5 line 60-col 6 line 5); and

updating operational parameters in the mobile station in accordance with data received on the assigned traffic signaling channel upon the acceptance by said mobile station (col 6 lines 6-27).

Heidari does not disclose a comparison of a mobile station signature and network signature.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

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It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Regarding claim 5,

Heidari further discloses that said alerting comprises the use of a unique command word (reads service option indicator, col 5 lines 60-67).

Regarding claim 10,

Heidari discloses a method of updating operational parameters in a mobile station of a wireless communication network comprising the steps of:

paging a mobile station with a network initiated update request (col 5 line 60-col 6 line 5);
updating operational parameters in said mobile station from network received data (col 6 lines 6-27); and

inherently, returning said mobile station to a status that is other than update status.

Heidari does not disclose steps of correlating network data with mobile station data for validating network authority.

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Mizikovsky discloses a method for updating data in a mobile station comprising correlating a network challenge received by the network from said mobile station with network stored data for validating the network authority to update, correlating a challenge response from the network with mobile station stored data before accepting update data in said mobile station, and then updating said mobile station data (col 4 line 48-col 5 line 35).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Regarding claim 11,

Heidari further discloses that said alerting comprises the use of a unique command word (reads service option indicator, col 5 lines 60-67) to set the mobile unit into a programming mode.

Regarding claim 12,

Heidari discloses mobile station means comprising:

over the air functional entity means for receiving programming instructions and data via a traffic signaling channel; and

means for storing over the air received update data (col 5 lines 25-40 and 60-col 6 line 5).

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Heidari does not disclose identity validation means.

Mizikovsky discloses mobile station means (12a) for receiving data via a traffic signaling channel and storing said data, further comprising means for validating the identity of a network service provider, attempting to initiate over the air programming of the mobile station, before allowing update data to be stored (col 4 lines 21-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Regarding claim 13,

Mizikovsky further discloses that said means for validating combines stored unique and internally generated data to form secret data words which are matched against similarly generated secret data words formed from home network stored data (col 1 lines 33-46 and col 4 lines 48-53).

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 6 above, and further in view of Mizikovsky.

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While disclosing applicants invention of claim 6, Heidari does not disclose a validation means in said first means.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 8 above, and further in view of Mizikovsky.

While disclosing applicants invention of claim 8, Heidari does not disclose a validation means in said first means.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile station internally generated signature with

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a traffic channel received signature where the received signature is derived from data stored at the home network of the mobile station, and updating data upon occurrence of a satisfactory comparison (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

12. Claims 14, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry, Jr et al (Henry), US Pat 5,603,084 in view of Cyr et al (Cyr) US Pat 5,890,075.

Regarding claims 14 and 18,

Henry discloses means for performing a method of alerting a wireless communication network that an attempt to update operational parameters in a mobile station has failed comprising:

means for performing a step of setting an over-the-air parameter administration pending flag; and

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means for performing a step of storing an over-the-air functional flag (reads address) for reinitiating the update process (col 10 lines 17-29).

Henry does not disclose that said flag and address may be stored at the network.

Cyr discloses a method of alerting a wireless communication network that an attempt to update operational parameters in a mobile station has failed comprising:

storing a status report showing an over-the-air parameter administration pending status and an over-the-air functional status for reinitiating the update process (col 4 lines 36-58).

It would have been obvious to one skilled in the art at the time of the invention to add the function of Cyr to the invention of Henry.

Henry teaches it is useful to track the status of the updating of the memory of a mobile station; Cyr teaches it is useful to track the status of many mobile stations at the network so as to facilitate a more efficient updating procedure for a plurality of mobile stations. Thus, adding the function of Cyr to Henry would allow the status of many mobile stations to be kept, rather than at each individual mobile station, for better network management.

Further regarding claims 16 and 19,

Cyr further discloses that said pending status is set in conjunction with data at the MSC which shows that a mobile station update has not yet been completed (col 4 lines 36-53).

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 23 above.

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While disclosing applicants invention of claim 23, Heidari does not disclose that the setting and updating are performed on the paging channel.

However, it was well known at the time of the invention to transmit data on a paging channel between a base station and a mobile unit. The examiner takes official notice as such. It would have been obvious to use a paging channel, in the case of a small update of data, as such a step may save bandwidth by avoiding a high-bandwidth traffic channel.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heidari as applied to claim 23 above, and further in view of Mizikovsky.

Heidari discloses applicants invention, except steps of comparing a mobile station internally generated secret word with a secret word received from the network.

Mizikovsky discloses that it is useful, when updating a mobile stations parameters, to provide means in said mobile unit to compare a mobile stations internally generated secret data with a traffic channel received secret datum where the received data is derived from data stored at the home network of the mobile station, and said step is performed prior to the updating step (col 4 lines 48-67).

It would have been obvious to one skilled in the art to add the function of Mizikovsky to Heidari.

The motivation behind such a combination of references would have been to increase security. Heidari teaches it is useful to update a mobile stations memory at times. Mizikovsky teaches that it is useful to update mobile station memory only after shared secret data has been

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compared, so as to reduce instances of fraud (col 1 lines 16-24). Thus, adding the authentication of Mizikovsky to Heidari would increase security measures and reduce theft.

Allowable Subject Matter

15. Claims 15, 19 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

17. The following is a statement of reasons for the indication of allowable subject matter:

Claims 15 and 19 teach towards an apparatus and method for alerting a network that an attempt to update data in a mobile station has failed, wherein said network sets a flag showing an update is pending (i.e. not completed), and a flag for reinitiating the update process, and setting said first flag in conjunction with HLR data when said mobile station is not available. While the prior art shows an HLR which may be used in such a system (see Mizikovsky), the prior art does not teach or suggest setting an update pending flag in conjunction with data from said HLR when a mobile unit is not available.

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Claim 17 teaches towards an apparatus and method such as that taught in claim 15, wherein when an update is not completed in a predetermined way, said flag indication is transferred to the HLR in the system.

Claims 21 and 22 teach toward a method and apparatus for validating a mobile station for the purpose of updating data in said mobile station, wherein said mobile station generates a secret word which is a combination of a first and second word inside said mobile station, and wherein a second secret word is generated, derived from network data, said second secret word being a combination of the first two combined words and a copy of the first word, supplying said second secret word to the mobile station, and comparing said secret words (first and second) within said mobile station. The prior art teaches the use of secret data, but does not disclose or suggest the extra steps in the validation process taught by the applicant.

Claims 15, 17, 19 and 20-21 are neither taught nor suggested by the prior art.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gordon discusses a method for automatically downloading software to a mobile station, said download being initiated by the network.

Lynch et al discusses a method for downloading new system information into a mobile station.

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19. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9508 (for informal or draft communications, please label "PROPOSED"

or "DRAFT")

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington VA, sixth floor (receptionist).

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Craver whose telephone number is (703) 305-3965.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached on (703) 305-4778.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

C. Craver
December 17, 1999

CC

**CHARLES CRAVER
PATENT EXAMINER**


**TRACY M. LEGREE
PATENT EXAMINER**